

L 10207-63
ACCESSION NR: AP3000053

3

greatly indebted to A. V. Gaponov and V. P. Dokuchayev for discussing the results." Orig. art. has: 8 formulas.

ASSOCIATION: Radiofizicheskiy institut Gor'kovskogo gosudarstvennogo universiteta (Radiophysics Institute, Gor'kiy State University)

SUBMITTED: 22Nov62 DATE ACQ: 12Jun63 ENCL: 00

SUB CODE: PH NR REF Sov: 005 OTHER: 000

b7c
Card 2/2

OSTROVSKIY, L.A.; STEFANOV, N.S.

Parametric generation of electromagnetic waves in a magnetooactive plasma. Zhur. eksp. i teor. fiz. 45 no.5:1473-1478 N '63.
(MIRA 17:1)

1. Radiofizicheskiy institut Gor'kovskogo posudaratvennogo universiteta.

ACCESSION NR: AP4025929

S/0056/64/046/003/0963/0969

AUTHORS: Ostrovskiy, L. A.; Yakubovich, Ye. I.

TITLE: Averaged laser equations and their stationary solutions

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 46,
no. 3, 1964, 963-969

TOPIC TAGS: laser, laser nonlinear equations, laser rigorous non-linear equations, laser averaged equations, two level laser, stationary nonlinear laser oscillations, oscillation frequency spectrum, field spatial distribution, nonlinear laser modes, periodically varying oscillation amplitude

ABSTRACT: The difficulties involved in solving the rigorous nonlinear laser equations are listed, and it is shown that some of the solutions obtained are incorrect. Some laser theory aspects connected with the influence of the nonlinear medium on the field struc-

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ture are considered, and it is shown that the initial equations can be averaged under some general assumptions and reduced to a lower order system for slow time-varying quantities. In particular, averaged equations are derived for the electromagnetic field in a two-level active medium without expansion in the eigenfunctions of the unperturbed system, and are solved for stationary nonlinear oscillations in a plane layer with arbitrarily reflecting boundaries, which can be regarded as a one-dimensional laser model. The frequency spectrum of such oscillations and the corresponding spatial distributions of the field phase and amplitude are obtained. The components obtained determine the finite number of possible nonlinear oscillations (modes) whose frequencies differ from the natural frequencies of the unperturbed system, and whose amplitudes and phases depend on the coordinates. It is emphasized that the superposition of these modes is not the solution of the problem and that the question of existence of other stationary processes (such as oscillations with periodically varying amplitudes) still remains open.

Orig. art. has: 2 figures and 19 formulas.
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ACCESSION NR: AP4025929

ASSOCIATION: Radiofizicheskiy institut Gor'kovskogo gosudarstvennogo
universiteta (Radiophysics Institute of the Gor'kiy State University)

SUBMITTED: 09Aug63

DATE ACQ: 16Apr64

ENCL: 00

SUB CODE: PH

NO REF Sov: 008

OTHER: 001

Card 3/3

L 60989-65 EEC-2/EEC-1; EED-2/EEC(k)-2/EEA(h)/EAT(d)/ET(1)/EEC(m)/EM(1) B6/1c

AM5017153

BOOK EXPLOITATION

UR/
621.317.01.077

Ostrovskiy, Lev Aleksandrovich

Principles of the general theory of electric measuring instruments.
(Osnovy obshchey teorii elektroizmeritel'nykh ustroystv) Moscow,
Izd-vo "Energiya", 1965. 530 p. illus., biblio., index. 9500
copies printed.

TOPIC TAGS: electric measuring instrument, transducer, energy conversion, electromechanical transducer, oscillatory circuit, frequency response, error correction, servo measuring system, servosystem, digital measuring circuit, astatic servosystem, servosystem

PURPOSE AND COVERAGE: This book is intended for technicians and engineers concerned with the development of methods of electrical measuring and with the computation and design of all types of electrical measuring equipment. It can also be used as a textbook

general theory of measuring converters, problems pertaining to their

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matching, and their frequency and transient characteristics. The structural forms of the basic types of various measuring circuits, their special features, specific errors, and some common correction methods are discussed. The basic types of modulation and demodulation in open measuring circuits, as well as the properties of closed astatic and static measuring servosystems, are investigated.

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SUB CODE: EC SUBMITTED: 01Feb65 NO REF Sov: 091

OTHER: 001

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L 48042-¹³ ERD(k)/FBI/SAC(r)/EMT(1)/EEC(z)-2/EDC(k)/I/EDC(b)-2/FWP(k)/JWA(m)-2/LW(1)
P-4/Pn-4/Po-4/Pf-4/Pt-4/Pi-4 SGTB/JW(c) wG

ACCESSION NR: AP5010681

UR/0141/65/008/001/0091/0097
51
41
B

AUTHOR: Ostrovskiy, L. A.; Yakubovich, Ye. I.

TITLE: Steady-state oscillation of a laser with distributed losses
25

SOURCE: IVUZ. Radiofizika, v. 8, no. 1, 1965, 91-97

TOPIC TAGS: laser oscillation, laser loss, laser operating mode, laser active medium

ABSTRACT: This is a continuation of an earlier work (ZhETF v. 46, 962, 1964) devoted to possible stationary (monochromatic) processes in a laser. In the present article the authors study the behavior of electromagnetic oscillations in a plane active medium under the assumption that the energy losses are due not only to radiation through the layer boundary, but also to losses in the medium itself, which contains active molecules. The report considers the one-dimensional problem of oscillations in a plane-parallel layer containing two-level active molecules. A phase-

~~nonlinear oscillations and the corresponding distribution of the amplitude and~~

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L 48092-65

ACCESSION NR: AP5010681

phase of the field in space. It is shown that several stationary frequencies are possible in the case of a thick but limited layer. If the layer is sufficiently thick, then to each frequency there corresponds also a finite number of modes with different field distributions in space and with different values of output power. To determine the exact oscillation that will be produced it is necessary to analyze the nonstationary processes in each case, including the initial disturbance ² as the laser. "The authors thank A. V. Gaponov for in-

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due to [redacted]
terest in the work and for a discussion of the results." Orig. art. has: 3
figures and 16 formulas. [02]

ASSOCIATION: Nauchno-issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom
universitete (Scientific Research Radiophysics Institute at the Gor'kiy Universi-
ty)

SUBMITTED: 28Mar64

ENCL: 00

SUB CODE: EC

NO REF Sov: 002

OTHER: 000

ATTD PRESS: 1002

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Card 2/2

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L 01178-66 EWT(d)/EEC(k)-2/EED-2 WS-4

ACCESSION NR: AP5017654

UR/0109/65/010/007/1176/1180
621.391.814

AUTHOR: Ostrovskiy, L. A. 44

TITLE: Propagation of frequency-modulated signals in dispersing systems

SOURCE: Radiotekhnika i elektronika, v. 10, no. 7, 1965, 1176-1180

TOPIC TAGS: As the Fourier method is inadequate for analyzing the propagation of FM waves (compressed pulses) in dispersing systems, the present article offers a more general solution based on a time-domain approach. Variation of frequency in a frequency-modulated wave, propagating in a system having an arbitrary dispersion characteristic, is described by a first-order nonlinear partial differential equation. A Riemann integral is the solution of this equation in a single-variable case. The variation of the wave amplitude depends on the shape of the frequency envelope. It is found that, under certain conditions, the dispersion results in a grouping of the wave energy within narrow intervals associated with abrupt frequency changes. A certain similarity between the propagation of group fronts in a FM-wave and the travel of particles in a velocity-modulated beam is noted. "The author wishes to thank A. V. Gaponov for discussing the results." Orig. art. has: 16 formulas. 94

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L 01178-56

ACCESSION NR: AP5017654

ASSOCIATION: none

SUBMITTED: 04May64

ENCL: 00

SUB CODE: EC

NO REF Sov: 007

OTHER: 002

KC
Card 2/2

L 9864-66

ALL MSG AP6003740

SOURCE CODE: UN/010b/65/000/004/0008/0013

AUTHOR: Ostrovskiy, L.A. (Engineer); Meyklyar, N.V. (Engineer)

OHO: none

TITLE: Type TPP-200 boiler for 800 Mw system

SOURCE: Elektricheskiye stantsii, no. 4, 1965, 8-13

TOPIC TADS: electric power engineering, thermoelectric power, steam boiler

ABSTRACT: A general description of the design, construction and constructive lessons learned in producing a series of power system boilers, including the types TPP-110 and TPP-210 of 300 Mw capacity and the TPP-200, designed for use in power systems capable of producing 800 Mw. The group includes both single and double block boilers, the latter having been found to be preferable, since a breakdown requires only a temporary reduction in power output as one section is shut down, not a complete shutdown. Cross-sections and diagrams are presented to explain the operation and design features of the TPP-200. Orig. art. has 5 figures, and 2 tables. [JPRS]

SUB CODE: G9 / SUBM DATE: none

UDC: 621.18.65

Card 1/1

L-45734-65 EEC(b)-2/EWG(r)/EEC(k)-2/EWA(h)/EWA(k)/EWP(k)/EWT(l)/EEG(t)/
FBD/T/EWA(m)-2 P1-4/P1-4/Pm-4/Pn-4/Po-4/Peb IJP(c) NG
ACCESSION NR: AP5010504 UR/0056/65/048/004/10B7/2096

6 /

5 /
3

AUTHOR: Ostrovskiy, L. A.

TITLE: Interaction of oscillation modes in a laser 25

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 48, no. 4, 1965,
1087-1096

TOPIC TAGS: laser, one mode laser, two mode laser, laser cavity, laser stability

ABSTRACT: It is pointed out in the introduction that the customary assumption made that laser transients involve only one fundamental cavity mode are not always satisfied in practice, and that more modes must be taken into account. The author then proceeds to obtain, within the framework of the model of a two-mode laser cavity, a sufficiently complete picture of both the stationary and nonstationary processes occurring in the laser. The modes are assumed to have different frequencies and the laser equations are reduced for this case, by an averaging method, to a system of dimensionless abbreviated equations of third order. The phase plane method is used to investigate the stability of the monochromatic and two-mode operations and to describe the transients in the laser. "The author is

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L 45734-65

ACCESSION NR: AP5010504

grateful to A. V. Gapony and G. I. Freymann for a discussion of the results."
Orig. art. has: 2 figures and 17 formulas.

ASSOCIATION: Radiofizicheskiy institut Gor'kovskogo gosudarstvennogo universiteta
(Radiophysics Institute of the Gor'kiy State University)

SUBMITTED: 31Jul54

ENCL: 00

SUB CODE: EC

NR REF Sov: 007

OTHER: 004

ATD PRESS: 4001

Card 2/2

L 10261-66 FBD/EWT(1)/EEC(k)-2/T/EWP(k)/EWA(m)-2/EWA(h) SCTB/IJP(c) WG

ACC NR: AP60000212

SOURCE CODE: UR/0056/65/049/005/1535/1543

AUTHOR: Ostrovskiy, L. A. 44

ORG: Radiophysics Institute of the Gor'kiy State University (Radiofizicheskiy institut Gor'kovskogo gosudarstvennogo universiteta)

TITLE: Automodulation of radiation of a laser ^{25/54} with a two-mode resonatorSOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 49, no. 5, 1965,
1535-1543

TOPIC TAGS: solid state laser, laser modulation, laser pulsation, laser emission

ABSTRACT: This is a continuation of earlier work by the author (ZhETP v. 48, 1087, 1965), dealing with a solid-state laser operating in two-resonator modes. Whereas in the earlier investigation it was assumed that the two modes are not close enough for the resonant bands to overlap, in the present article frequencies are assumed close enough to produce undamped automodulation of the laser emission. Using the same model as in the preceding paper, the author investigates the possible monochromatic processes and their stability, and also nonlinear intensity oscillations (spikes). A phase-space analysis shows that such oscillations can become undamped, inasmuch as the phase space of the averaged equations of the system contains a stable limit cycle. The waveform and the amplitudes of the corresponding spikes are determined on the basis of this analysis. Author is grateful to A. V. Gaponov for interest in the work and a discussion of the results. Orig. art. has: 73 figures and 22 formulas.

SUB CODE: 20/ SUBM DATE: 03Jun65/ ORIG REF: 004/ OTH REF: 002/ ATD PRESS:
Cord 1/1 80 4161

L26050-66 EWT(1) GO

ACC NR: AP5022797

SOURCE CODE: UR/0141/65/008/004/0738/0742

82
B

AUTHOR: Ostrovskiy, L. A.

ORG: Radio-physics Scientific Research Institute of Gor'kiy University
(Nauchno-issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom
universitete)

TITLE: Rotational discontinuities in electrodynamics of nonlinear media

SOURCE: IVUZ. Radiofizika, v. 8, no. 4, 1965, 738-742

TOPIC TAGS: electrodynamics, shock wave, electromagnetic field,
shock wave interaction

ABSTRACT: Only one type of electromagnetic field discontinuities in nonlinear medium has been investigated--electromagnetic shock waves in which the direction of field polarization during transition through the discontinuities is not changed. In view of the vector character of the electromagnetic field, it should be expected that discontinuities with a change in direction of the field vectors are also possible. In order to ascertain in general how the types of discontinuities are possible, boundary conditions are examined in a discontinuity in their vector form. A. V. Gaponov, G. I. Freydman (Izv. vyssh. uch. zav. Radiofizika, 3, 79, 1960).

UDC: 621.371.11

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L 26050-66

ACC NR: AP5022797

$$[n, E_2 - E_1] = \frac{v_n}{c} (B_2 - B_1), \quad D_{n1} = D_{n2}$$

$$[n, H_2 - H_1] = -\frac{v_n}{c} (D_2 - D_1), \quad B_{n2} = B_{n1}.$$

Here n is the normal in the discontinuity surface, v_n is the normal component of discontinuity transit rate; indexes 1 and 2 are related to field strength values and inductions before and during discontinuity. It is shown that, under general conditions, two types of electromagnetic field discontinuities in the nonlinear medium are possible: shock wave and rotational discontinuities. The formation of rotational discontinuities has been considered in shock wave interaction. The stationary rotational configurations form only at a slow (quasi-static) field rotation. The relaxation and dispersion effects lead to diffusion of the rotational discontinuities. There is an analogy between the processes examined in an infinite space and waves in coupled transmission lines. Orig. art. has: 2 fig. and 12 equations.

SUB CODE:20 / SUBM DATE: 02Dec64/ ORIG REF: 007

Card 2/2 *pls*

ACC NR: AP6036058

SOURCE CODE: UR/0056/66/051/004/1109/1194

AUTHOR: Ostromskiy, L. A.

ORG: Radiophysics Institute of the Gor'kiy State University (Radiofizicheskiy
institut Gor'kovskogo gosudarstvennogo universiteta)

TITLE: Propagation of wave packets and the space-time self-focusing in a nonlinear
medium

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 51, no. 4, 1966, 1189-
1194

TOPIC TAGS: ~~nonlinear optics~~, self-focusing, light propagation, light modulation
~~laser and~~, light pulse, laser optic material

ABSTRACT: The author discusses a self-focusing phenomenon occurring when modulated
waves propagate in a transparent nonlinear dispersive medium. This phenomenon consists
of space-time deformation of the modulated wave envelopes. Equations are derived for
the envelopes, and both nonstationary and stationary (periodic and single) solutions
are obtained for them. It is shown from an analysis of the equations that a mono-
chromatic wave can be unstable against traveling perturbations of both its amplitude
and its frequency. Cases when these perturbations undergo cumulative deformation in-
stead of growing are also shown to exist. It is also shown that the physical real-

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ACC NR: AP6036058

izability of self-focusing of the type discussed depends essentially on the degree of nonlinearity of the medium and on its dispersive properties. A numerical estimate shows that with contemporary lasers, the perturbations of a light pulse can become appreciable after propagating over a distance on the order of 1 meter, the modulation frequency corresponding to a wavelength of about 0.1 mm. The similarities and differences between ordinary spatial self-focusing and space-time self-focusing are discussed briefly. The author thanks A. V. Gaponov for a discussion of the results. Orig. art. has: 2 figures and 10 formulas.

SUB CODE: 20/ SUBM DATE: 23Apr66/ ORIG REP: 010/ OTH REP: 002 / ATD PRESS: 5106

Card 2/2

KUZ'MENKO, P.P.; OSTROVSKIY, L.F.

Mobility of Ag¹¹⁰ in magnesium. Fiz.tver.tela 4 no.10:2984-
2986 O '62. (MIRA 15:12)

1. Kiyevskiy gosudarstvennyy universitet imeni T.G.Shevchenko.
(Silver—Isotopes) (Magnesium)

3/13/62 004/005/042 000
3139/3102

AUTHORS: Kuz'menko, I. P., and Setrovskiy, L. F.

TITLE: Solubility of silver in nickel

PUBLISHER: Nizkaya temperaturovaya, v. 4, no. 3, 1962, 1553-1563

TEXT: The polished front faces of round nickel rods, 5 mm in diameter and 10 - 12 mm in length, were coated with a layer of radioactive silver 0.5 - 1.5 μ m thick. The specimens were electrically connected in vacuum, the areas of contact being preheated to 100°C and then brought up to the temperature required for the experiment. Current density was $40 - 12 \text{ A/mm}^2$. Subsequently, the depth distribution of integral activity N_{a} was measured in the anode and cathode parts of the layers removed by mechanical means. Owing to a notable evaporation of silver, this amounted to only 300 - 700 imp./min, with a background of 4 imp./min. As an example experiment no. 5 gave the following results: $t = 3$ hrs, $T = 1645^{\circ}\text{K}$, current density $i = 74 \text{ A/mm}^2$, ion velocity $v = 16.3 \times 10^7 \text{ cm/sec}$, diffusion coefficient $D = 15.6 \times 10^{-9} \text{ cm}^2/\text{sec}$, electric resistance of nickel

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mobility of silver...

3,131, 62, 314, 335, 342, 351
313, 3102

at the experimental temperature $\rho = 0.7 \times 10^{-6}$ ohm.cm, $\frac{F}{e_2} = 16$. These results cannot be explained by field action on the positive charge of the silver ion, but rather on the assumption that the electronic holes play the same part as the electrons in simple metals. In the case of transition metals through which Ag^+ flows, the force of the hole wind is decisive for migration. In interpreting experimental results, this fact must be taken into account when migration proceeds toward the cathode. There are 1 table and 1 figure.

ASSOCIATION: Kiyevskiy gosudarstvennyy universitet im. T. G. Shevchenko
(Kiev State University imeni T. G. Shevchenko)

SUBMITTED: December 30, 1961

Card 2, 2

KUZ'MENKO, P.P.; OSTROVSKIY, L.F.; KOVAL'CHUK, V.S.

Mobility of Sb, Fe, Co in solid copper. Fiz.tver.tela 4
no.2:490-493 F '62. (MIA 15:2)

1. Kiyevskiy gosudarstvennyy universitet imeni T.G.Shevchenko.
(Radioisotopes) (Copper)

S/148/62/000/011/007/013
E111/E435

AUTHORS: Kuz'menko, P.P., Ostrovskiy, L.F.

TITLE: Electro-transfer of silver in copper

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Chernaya metallurgiya, no.11, 1962, 146-149

TEXT: The transfer of silver in solid copper under the influence of heavy direct currents was studied with the aid of the radioactive isotope Ag¹¹⁰. With intensive cooling of the electrode current densities of 200 to 300 A/mm² could be obtained. After current had passed for several hours the distribution of radioactivity along the specimen on one end of which a layer of Ag¹¹⁰ had previously been deposited was studied. Substantial transfer of silver towards the anode occurred indicating that, as in other systems studied by the authors, the motive force was the force of the electron wind. From the results obtained the average value of the effective charge of the activated (i.e. participating in the diffusion) silver ion in copper was found to be 0.73 electron units. There are 1 figure and 1 table.

ASSOCIATION: Kiyevskiy gosudarstvennyy universitet (Kiyev State University)

SUBMITTED: February 21, 1961

Card 1/1

S/181/62/004/010/059/063
B102/B104

AUTHORS: Kuz'menko, P. P., and Ostrovskiy, L. F.

TITLE: The Ag¹¹⁰ mobility in magnesium

PERIODICAL: Fizika tverdogo tela, v. 4, no. 10, 1962, 2984-2986

TEXT: The Ag¹¹⁰ mobility in Mg of the variety MG-1 (MG-1) was determined by a d-c method described in the authors' earlier papers (UFZh, 6, 525, 1961; FTT, 4, 490, 1962; 4, 1360, 1962). The measurements were made in the range 470-570°C at current densities of 38 - 63 a/mm². The curves showing the depth-dependence of the integral activity enabled the migration rate v was calculated. Then, by comparing the forces acting on the ion ($F/Ee = \bar{q}kT/D\epsilon$) in accordance with the usual procedure, the effective charge of the silver ion and the mean scattering cross section are calculated, using Fiks' theory (V. B. Fiks, FTT, 1, 16, 1959):

- $F/eE = q^* - \bar{q} \sigma/\sigma$, where q^* is the charge of the activated ion, \bar{q} the mean ion charge in the metal, σ the scattering cross section of the

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The Ag¹¹⁰ mobility in magnesium

S/181/62/004/010/059/063
B102/B104

activated Ag ion and $\bar{\sigma}$ the mean scattering cross section. The results were: $\bar{\sigma} = 6.7 \cdot 10^{-16} \text{ cm}^2$ which is almost equal to the cross section $r^2 \pi$, and $\bar{q}_{\text{Ag}} = 1.5$. The great value of \bar{q} shows that the Ag electron structure in Mg differs greatly from that of activated Ag in Ag. There are 1 figure and 1 table.

ASSOCIATION: Kiyevskiy gosudarstvennyy universitet im. T. G. Shevchenko (Kiyev State University imeni T. G. Shevchenko)

SUBMITTED: June 14, 1962

Card 2/2

After the initial examination, the sample was placed in a vacuum desiccator and subjected to different temperatures and elevated temperatures. At the present time, there were no samples in the scintillation areas, and the activity was measured directly with a gamma counter. The internal activity, however, was determined at the later inter-examination, wherefrom the ratio of mother and the daughter is sufficient to be calculated. At the time of radiation, the daughter was taken into account by equation (1) of Gandy: $\text{Cl}^{36} = \text{Cl}_0 e^{-\lambda t} + \text{Cl}_1 e^{-\lambda_1 t}$, where λ is the specific activity of the left Cl^{36} , and λ_1 is the effective retention linear rate of the effluent. Cl^{36} was found to be 1.2%.

the first two terms in the expansion of ψ were used to calculate the effective rate of growth of the system. The first term was found to be $\frac{1}{2} \ln(1 + \frac{1}{2} \alpha^2)$, where $\alpha = \sqrt{\frac{2}{\pi}} \cdot \frac{1}{2} \cdot \frac{1}{\sqrt{1 - \frac{1}{4} \sin^2 \theta}}$. The second term was found to be $\frac{1}{2} \ln(1 + \frac{1}{2} \alpha^2) + \frac{1}{2} \ln(1 + \frac{1}{2} \alpha^2)^2$. The effective rate of growth of the system was calculated to be $\frac{1}{2} \ln(1 + \frac{1}{2} \alpha^2) + \frac{1}{2} \ln(1 + \frac{1}{2} \alpha^2)^2$. All three terms in the word were added together and multiplied by the word weight to find the total effective rate of growth of the system.

INTRODUCTION

S. 181, 62, 004 071 77
5111 5102

There are three parts to this paper. The first part is a brief history of the development of the concept of the "natural environment" in the United States. The second part is a discussion of the various definitions of the natural environment. There are no figures, tables, and no references. The third part is a brief conclusion.

Journal of the American Statistical Association, Vol. 35, No. 201, March, 1940
Karl Pearson, President, 1939-1940, and J. H. DIXON, Secretary.

19. *Chlorophytum comosum* (L.) Willd.

• 1 •

S/126/62/013/003/011/023
E021/E180

AUTHORS: Kuz'menko, P.P., Ostrovskiy, L.F., and
Koval'chuk, V.S.

TITLE: Mobility of small tin additions in copper and silver

PERIODICAL: Fizika metallov i metallovedeniye, v.13, no.3, 1962,
406-410

TEXT: The absolute transfer of tin in copper and silver during the passage of a direct current was studied by a method described previously (Ref. 2: P.P. Kuz'menko, L.F. Ostrovskiy, Ukr.fiz.zhurnal, no.6, 1961, 525). A thin layer of radioactive tin was deposited electrolytically on one end of two similar samples (2.5-3.5 mm diameter and 15-20 mm length). The active surfaces were placed in contact and connected to the electrodes in a vacuum apparatus. Current densities varied from 140 to 400 A/mm². The contact region was heated by direct current to 220 °C and held for 15-20 minutes. Then the current was increased and the contact region heated to the test temperature. After the test, the sample was removed from the apparatus and

Card 1/ 2

Mobility of small tin additions ...

S/126/62/013/003/011/023
E021/E180

broken along the contact plane, and the distribution of activity in the cathode and anode halves was measured. In all the experiments the tin migrated to the anode. Therefore, the force causing the migration is due to electrons, and arises from the scattering of valency electrons of the activated tin ions, because of the destruction of the periodicity of the lattice potential by the tin ions. The effective charge of the activated tin ion in electron units was calculated from the results obtained at different temperatures. For tin in pure copper, the effective charges at 1075, 1109, 1174 and 1153 °C are 1.6, 1.8, 1.3 and 1.0. For tin in copper + 0.1 atomic % tin the charges at 1101, 1161, 1159 °C are 1.5, 1.3 and 1.1. For tin in silver + one atomic % tin the charges at 1205, 1115, 1076, 1181, 1073 and 997 °C are 1.1, 1.2, 1.3, 0.9, 1.3 and 1.5 respectively.

There are 4 figures and 2 tables.

ASSOCIATION: Kiyevskiy gosuniversitet im. T.G. Shevchenko
(Kiev State University imeni T.G. Shevchenko)

Card 2/2

SUBMITTED: June 21, 1961

OSTROVSKIY, L.F.; KUZ'MENKO, P.P.

Mobility of silver in bismuth and of antimony in tin. Iz. vINITI. 1964
ved. 17 no.1:78-82 Ja '64. (MIRA 111.)

1. Kyivskiy ordena Lenina gosudarstvennyy universitet im. Shevchenka.

Urgent/Human and Animal Physiology - Blood, Blood Chemistry.

T

Abs Jour : Ref Zhur Biol., No 3, 1951, 125-129

Author : Ostrovskiy, L.F.

Inst : Zootechnical Veterinary Institute

Title : Variation in Protein and Protein Fractions of the Blood in Horses in Respect to Month, Season of Year, and Exploitation.

Orig Pub : Tr. Novocherkasskogo zootekhn.-vet. in-ta, 1957, Vyp. 12, 229-237

In 21 healthy horses the blood contained total protein of 5.06 - 8.24, fibrinogen of 0.15 - 0.36, albumin of 2.98 - 4.30, globulin of 2.11 - 4.12, euglobulin of 0.05 - 0.55, pseudoglobulin of 2.06 - 3.87 g%, the A/G coefficient was 0.90 - 1.50, and residual nitrogen was 26.5 - 70.5 mg%. In the same animals maximal fluctuations

Card 1/3

USP/Human and Animal Physiology - Blood, Blood Chemistry.

T

Ado Jour : Rev Nutr Mol., no 3, 1959, 12590

increased. For an accurate evaluation of protein metabolism it is necessary to fully investigate the blood protein. -- M.B. Goldberg

Card 3/3

KUZ'MENKO, P.P.; OSTROVSKIY, L.F. [Ostrovs'kyi, L.F.]

Electric transport of small admixtures of zinc and silver in
solid aluminum. Ukr. fiz. zhur. 6 no.4:525-530 Jl-Ag 61.
(MIRA 14:9)

1. Kiyevskiy gosudarstvennyy universitet im. Shevchenko.
(Mass transfer)

OSTROVSKIY, L. F.

OSTROVSKIY, L. F.: "Changes in protein and the protein fractions of blood serum in horses in gastro-intestinal colics". Novocherkassk, 1955. Min Higher Education USSR. Novcherkassk Zooveterinary Inst imeni First Cavalry Army. (Dissertation for the Degree of Candidate of VETERINARY Sciences)

SO: Knizhnaya Letopis' No. 51, 10 December 1955

"APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001238510019-1

SPYCHAL, I.S.; KREBEEK, A.V.; OSTROVSKIY, Z.Z.; VITOVSKA, V.;
etc.

For the motor-vehicle driver. Vitebsk, 1965. 105 p. (M.A. 3).

APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001238510019-1"

SHCHURENKO, Yu.; OSTROVSKIY, M.; SHPRINTSIN, V., doto.

Alternating-current electric dirve for cargo winches on "Andizhan"-
type vessels. Mor. flot 20 no.11:24-27 N '60. (MIRA 13:11)

1. Starshiy inzhener-elektrik mekhaniko-sudovoy sluzhby Dal'nevostochnogo
parokhodstva (for Shchurenko). 2. Nachal'nik elektrootdela Dal'ne-
vostochnogo parokhodstva (for Ostrovskiy). 3. Dal'nevostochnyy
politekhnicheskiy institut imeni Kuybysheva (for Shprintsin).
(Winches--Electric driving) (Electricity on ships)

COTROVSKII, M.

Precast reinforced-concrete elements for electric power and telephone and telegraph lines. Tr. from the Russian. p. 7.
MINISTERSTVO STAVETNICTVI
Praha.
Vol. 4, no. 1, Jan. 1956.

SOURCE: FEAL LC Vol. 5, No. 10, Oct. 1956

OSTROVSKIY, N., kandidat tekhnicheskikh nauk.

Trailers for moving large construction panels. Avt.transp. 72
no.3:6-7 Mr '54. (MLRA 7:8)
(Building materials--Transportation)(Automobiles--Trailers)

OSTROVSKIY, M. A.

OSTROVSKIY, M. A.

"The Problem of Designing Prismatic Lamps",

Elektrichestvo, No 6, 1949. Cand. Technical Sci., Acad.

Public Economy imekd Penfilov. -c1949-.

B 68
a

623.9 : 621.325

1668. Distribution of annual luminous flux by prismatic systems. M. A. Orlovskii. *J. Tekh. Phys.*, USSR, 26, 738-44 (Mar., 1950) *In Russian*.

A theoretical and experimental investigation of the luminous flux distribution of the prismatic reflecting systems of the "Golofta" lamps. Discrepancies between calculations and experimental data do not exceed 8-10% in the zones of maximum flux.

S. P. KRAUS

ASD-LLA METALLURGICAL LITERATURE CLASSIFICATION

"APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001238510019-1

ZILBERLAT, Ya. B. and GSTRCVSKIY, M. A.

"Lighting of City Streets," Moscow, 1951.

APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001238510019-1"

Ostrovs'kiy, M. A.

14 Mar 52

**USSR/Electricity - Illuminating Engineering Nov 52
Instruments**

"An Objective Luxmeter for Measuring Low Illuminations," Doc M. A. Ostrovskiy, Moscow Eng Construction Inst imeni Kuybyshev

"Elektrichestvo" No 11, pp 62-64

Describes new objective luxmeter designed to measure illuminations down to 0.1 lux in outdoor lighting installations. Testing of exptl luxmeter showed its suitability for this purpose. Submitted 14 Mar 52.

240168

ZIL'BERBLAT, Ya.B.; OSTROVSKIY, M.A.; FEDOTKIN, S.N.; AKATOVA, V.G., re-
daktor, GUBOVA, O.A., tekhnicheskiy redaktor.

[Layout for effective city lighting] Ratsional'nye skhemy osveshcheniya
gorodov. Moskva, Izd-vo Ministerstva kommunal'nogo khoziaistva RSFSR.
(MLR' 8:1)
1954. 50 p.
(Street lighting)

OSTROVSKIY, M. A.

628.971 : 621.327.43

§391. Use of fluorescent lamps for outdoor lighting.

Ya. B. ZUBERIAT, M. A. OSTROVSKI AND S. N.
EVROKIS. *Elektricheskoe*, 1954, No. 6, 58-62. *In
Russian.*

A reduction of the ambient temperature reduces the luminous flux of fluorescent lamps and renders their use for public lighting more difficult. An increase of the efficiency of fluorescent lamps for outdoor lighting may be achieved by enclosing the lamps in heat-insulating jackets. Special thermal relays should be used for reliable automatic connection of the lamps during the cold season. The maximum permissible voltage drop in lighting systems with fluorescent lamps is 8-10%. The experiments showed that the luminous flux of the lamps increases when the lamp walls are kept at 30-40°C, and also that this may be assured by insulating jackets, except that the effectiveness of this protection is somewhat reduced by strong winds.

B. F. KRAUS

OSTROVSKII, M.A.

On the problem of improving Moscow's outside lighting. Gor.khoz.Mosk.
28 no.11:20-24 N '54.
(MIRA 9:1)

1. Dotsent Moskovskogo inzhenerno-stroitel'nogo instituta im.
V.V.Kuybysheva.
(Moscow--Street lighting)

OSTROVSKIY, M.A., kandidat tekhnicheskikh nauk.

Investigation of the reflecting properties of asphalt street pavements. Svetotekhnika 2 no.1:11-16 Ja '56. (MLRA 9:3)

1. Moskovskiy inzhenerno-stroitel'nyy institut.
(Reflection (Optics)) (Pavements, Asphalt)

OSTROVSKIY, M.A., kandidat tekhnicheskikh nauk.

Calculation and measurement of pavement brightness. Svetotekhnika 2
no.2:14-18 Mr '56. (MIRA 9:7)

1. Moskovskiy, M.A., kandidat tekhnicheskikh nauk.
(Street lighting)

Chas. Relyashch. 114
KROL', TS.I., kandidat tekhnicheskikh nauk; OSTROWSKIY, M.A., kandidat
tekhnicheskikh nauk.

Glare of fluorescent lamps. Svetotekhnika 2 no.4:22-25 J1 '56.
(Fluorescent lamps) (MLRA 9:10)

OSTROVSKIY, I.A., candidate of technical sciences.

The current situation and prospective development of municipal outdoor lighting. Sovet-tekhnika Press, 7-14. - '52. (MIRA 10:8)

I. Ostroumskiy - Zaporozh'e-Strukturnaya Instit. of street lighting.

OSTROVSKIY, M.A., kandidat tekhnicheskikh nauk.

Street lighting from the point of view of road safety. Svetotekhnika
3 no.2:30-32 P '57.
(MIRA 10:3)

1. Moskovskiy inzhenerno-stroitel'nyy institut.
(Street lighting) (Traffic accidents)

BELOVA, L.T., kandidat tekhnicheskikh nauk.; OSTROVSKIY, M.A., kandidat tekhnicheskikh nauk.; YUBOV, S.G., kandidat tekhnicheskikh nauk.

Prblems of reviewing the lighting norms for industrial buildings.
Svetotekhnika 3 no.5:26-28 My '57. (MLRA 10:5)

1. Vsesoyuznyy svetotekhnicheskiy institut.
(Lighting--Standards)

OSTROVSEIY, M.A., kand.tekhn.nauk

Street lighting calculations. Svetotekhnika 4 no.4:22-23 Ap '58.
(MIRA 11:4)

OSTROVSKIY, M.A., kand.tekhn.nauk

Saving electric power in street lighting devices. Svetotekhnika
6 no.3:1-7 Mr '60. (MIRA 13:6)

1. Vsesoyuznyy svetotekhnicheskiy institut.
(Street lighting)

OSEROVSKII, M.A., kand.tekhn.nauk

Measurement of the coefficient of glare of street lamps.
Svetotekhnika f. n. 4826-30 Ap '60. (MIRA 1)16)

1. Vsesoyuznyy svetotekhnicheskiy institut.
(Street lighting)

- OSTROVSKIY, M.A., red.; MIRONOV, A.V., red. iad-va; PYRKINA, N.F.,
tekhn. red.

[Outside lighting in cities] Maruzhnoe osveshchenie gorodov.
Moskva, 1961. 53 p. (MIRA 15:3)

1. Russia (1917- R.S.F.S.R.) Ministerstvo kommunal'nogo kho-
zyaystva.
(Street lighting)

S/196/61/000/011/010/042
E194/E155

AUTHOR: Ostrovskiy, M A

TITLE: Calculation of the brightness of road surfaces

PERIODICAL: Referativnyy zhurnal, Elektrotehnika i energetika
no.11, 1961, 14, abstract 11V 150 (Svetotekhnika,
no 5, 1961, 1-6)

TEXT: Three methods of calculating the brightness are considered. The analytical method of determining the brightness at any point on a street surface with any position of observer and light source uses the following formula:

$$r = r_0 + \frac{a}{1 + b \cotan^2 \gamma} \cdot \sec \theta_e^{-c\gamma}$$

where: θ is the angle of observation; a is the incident angle of light; γ is the angle between the line of vision and the direction of mirror reflection; r_0 , a , b , c are experimental constants (which depend upon the type and condition of road surface and the time for which it has been used etc.).

Card 1/2

BELOVA, L.T., kand.tekhn.nauk; GORBACHEV, N.V., kand.tekhn.nauk;
IVANOVA, N.S., kand.tekhn.nauk; KROL', TS.I., kand.tekhn.nauk;
OSTROVSKIY, M.A., kand.tekhn.nauk; SHEPTEL', Ye.B., kand.tekhn.nauk;
TSAR'KOV, V.M., inzh.

Proposed new version of "Norms on electric lighting."
Svetotekhnika 7 no.8:14-22 Ag '61. (MIRA 14:7)

1. Vsesoyuznyy svetotekhnicheskiy institut.
(Electric lighting—Standards)

OSTROVSKIY, M.A., kand.tekhn.nauk

Nomenclature and range of light fixture sizes for lighting streets,
city squares and settlements. Svetotekhnika 7 no.9:1-4 S '61.
(MIRA 14:9)

1. Vsesoyuznyy svetotekhnicheskiy institut.
(Electric lighting)

OSTROVSKIY, M.A., kand.tekhn.nauk; PIODINA, T.L., inzh.

Light fixtures with sodium lamps. Svetotekhnika 7 no.11:3-5
N '61. (MIRA 14:11)

1. Vsesoyuznyy svetotekhnicheskiy institut.
(Light fixtures)
(Electric lighting, Sodium vapor)

0019 62 019 007 004 004
1037 1237

Z 019 62 019 007 004 004
1037 1237

AUTHORS Ostrovskij, M. A. and Flodina, T. I.

TITLE Illuminator for sodium discharge lamps

PERIODICAL *Přehled technické a hospodářské literatury*, no. 7, v. 19 1962, 322 Item no. F 62 4362

TEXT Brief description of a new Soviet illuminator for sodium discharge lamps of 140 W construction
luminescence lines, properties in street illumination. There are 1 photo, 1 drawing and 4 references

1961 XI Svetotechnika 7, No. 11, p. 35



Card 11

OSTROVSKII, M.A., kandidat nauk

quantitative evaluation of the glare of street lighting / stran. Svetotekhnika 8 no.6: 9 Je '62. (U.S. 1962)

1. Vsesoyuznyy aviotekhnicheskiy institut
(Street lighting)

ZIL'BERBLAT, Ya.B., kand.tekhn.nauk; OSTROVSKIY, N.A., kand.tekhn.nauk

Norms on street lighting. Svetotekhnika 8 no.10:4-8 0 '6.
(MIRE 19:9)

1. Akademiya komunal'nogo khozyaystva i Vsesyuzhnyy svetotekhnicheskiy institut.
(Street lighting--Standards)

ZIL'BERBLAT, Ya.B., kand.tekhn.nauk; OSTROVSKIY, M.A., kand.tekhn.nauk

Proposed norms and regulations for the lighting of streets, roads,
trains, and platforms. Svetotekhnika & no.10:9-11 O '6.
(MIR. 1';o)

(Street lighting--Standards) (Electric lighting--Standards)

OSTROVSKIY M.A., kand.tekhn.nauk

Basis for the norms on the average brightness of road surfaces in
municipal outdoor lighting systems. Svetotekhnika 8 no.11:10-12
N '62.
(MIRA 15:10)

1. Vsesoyuznyy svetotekhnicheskiy institut.
(street lighting)

SMIRNOVA, N.A.; OSTROVSKIY, N.A.

Persistent activity rhythms in the sea anemone. Nauch.dokl.
vys.shkoly; biol.nauki no.1:56-59 '59. (MIRA 12:5)

1. Rekomendovana kafedroy fiziologii zhivotnykh Moskovskogo
gosudarstvennogo universiteta im. M.V.Lomonosova.
(SEA ANEMONES) (ANIMAL LOCOMOTION)

POSKONOVA, M.A.; O.TROVSKIY, M.A.

Periodic activity of the heart following prolonged excitation of
the sympathetic nerve. Biul. eksp. i biol. med. 50 no. 8:3-8 Ag
'60. (MIRA 13:10)

1. Iz kafedry fiziologii zhivotnykh i cheloveka (zav. - chlen-
korrespondent Akademii nauk SSSR, K.M. S. Koshtoyants) Moskovskogo
ordena V.I. Lenina gosudarstvennogo universiteta imeni M.V.
Lomonosova. Predstavlena deystv. chленом AMN SSSR S.Ye. Severinym.
(HEART) (NERVOUS SYSTEM, SYMPATHETIC)

OSTROVSKIY, M.A.

Succinic dehydrase activity in the retina of the frog and its
change caused by light. Zhur. ob. biol. 22 no.6:471-474 N-D
'61. (MIA 14:11)

1. Institute of Higher Nervous Activity and Neurophysiology,
U.S.S.R. Academy of Sciences.
(SUCCINIC DEHYDRASE) (RETINA)

OSTROVSKIY, M.A.

Localization of acetylcholinesterase in the frog retina. Zhurn. ob
biol. 22 no.6:474-477 N-D '61. (MIA 1A:11)

1. Institute of Higher Nervous Activity and Neurophysiology,
U.S.S.R. Academy of Sciences.
(ACETYLCHOLINESTERASE) (RETINA)

OSTROVSKIY, M.A.

Descending effects on the retina in the frog. Biofizika 7 no.1:55-63
'62. (MIA 15:5)

1. Institut vysshey nervnoy deyatel'nosti i nevrofiziologii AN SSSR,
Moskva.

(RETINA--INNERVATION) (OPTIC NERVE)

OSTROVSKIY, M. A.

Dissertation defended in the Institute of Higher Nervous Activity and
Neurophysiology for the academic degree of Candidate of Biological
Sciences: 1962

"Problem of Descending Effects on the Retina of Amphibian Eyes."

Vestnik Akad Nauk No. 4, 1963, pp. 119-145

OSTROVSKIY, M.A.

Study of some links of the photoenzymochemical chain of processes
in photoreceptors. Biofizika 10 no.3:470-475 '65.
(MIRA 18:11)

1. Institut vysshey nervnoy deyatel'nosti i neirofiziologii
AN SSSR, Moskva. Submitted Sept. 26, 1964.

OSTROVSKIY, M.A.; FEDOROVICH, I.B.

Enzymatic (adenosinetriphosphatase) activity of digitonin extracts of rhodopsin (visual purple) and its change under the influence of visual light. Dokl. AN SSSR 162 no.6:1412-1414 Je '65. (MIRA 18:7)

1. Institut vysshey nervnoy deyatel'nosti i neyrofiziologii AN SSSR i Institut radiatsionnoy i fiziko-khimicheskoy biologii AN SSSR. Submitted October 12, 1964.

L 27113-66

ACC NR: AP6017472

SOURCE CODE: UR/0020/65/162/006/1412/1414
44
BAUTHOR: Ostrovskiy, M. A.; Fedorovich, I. B.ORG: Institute of Higher Nervous Activity and Neurophysiology, AN SSSR
(Institut vysshey nervnoy deyatel'nosti i neirofiziologii AN SSSR);
Institute of Radiation and Physicochemical Biology, AN SSSR (Institut
radiatsionnoy i fiziko-khimicheskoy biologii AN SSSR)TITLE: Change in enzymatic (ATPase) activity of digitonin extracts of rhodopsin
(visual purple) after exposure to visible light

SOURCE: AN SSSR. Doklady, v. 162, no. 6, 1965, 1412-1414

TOPIC TAGS: enzyme, organic phosphorus compound, biophysics, luminescence

ABSTRACT: In one series of experiments, a medium containing a buffer, MgSO₄, ATP, and rhodopsin or indicator yellow, with pH 7, was incubated for 25-30 min. Changes in ATP content were determined by the bioluminescence method in 0.2 ml of the medium withdrawn every 2-3 min. ATPase activity was evaluated from the decrease of ATP in the incubation medium. The experiments revealed considerable ATPase activity of the digitonin extracts of rhodopsin (obtained from dark-adapted intact frog retinas). The speed of the reaction was quite high. In control experiments of this series, a digitonin solution or visual pigment denatured by heating was added to the incubation medium instead of the rhodopsin. Neither had any significant effect on the amount of ATP in the medium.

2

Card 1/2

L 27113-66

ACC NR: AP6017472

In a second series of experiments, changes in ATP content under the influence of rhodopsin were recorded directly in a luciferin-luciferase system. As a control, digitonin was added to the luciferin-luciferase-ATP complex. It had no affect on the shape of the kinetic curve of bioluminescence extinction. The rate of the reaction was determined from the difference between the intensity of bioluminescence in the experiment (rhodopsin) and in the control (digitonin).

A comparison of the enzymatic activity of rhodopsin and the product of its decoloration showed that the latter had less ATPase activity.

The authors draw no conclusions from their experiments, but they conjecture that the enzymatic activity of visual pigment is largely dependent on the chromophore-protein bond and on a certain steric configuration of both opsin and retinene. Therefore, the activity of indicator yellow, in which this bond and the configuration of both parts of the chromoprotein molecule are sharply impaired, is much less.

The presence of enzymatic activity in visual purple and changes therein after exposure to visible light will help to elucidate the primary mechanisms of photoreception. This paper was presented by Academician V. A. Engel'gardt on 12 October 1964. Orig. art. has: 4 figures. [JPRS]

SUB CODE: 06, 20 / SUBM DATE 12Oct64 / ORIG REF: 004 / OTH REF: 008

Cord 2/2 JV

"APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001238510019-1

OSTROVSKIY, M.A., kand. biologicheskikh
Nauk

Chemistry of sight. Zdorov'e S. No. 4, 9-10 April, (MIRA Press)
(VISUAL PURPLE)

APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001238510019-1"

AYZENBERG, Yu.B.; GORBACHEV, N.V.; GOREV, Z.M.; DEMCHEV, V.I.;
YEFIMKINA, V.F.; IVANOVA, N.S.; KOMISSAROV, V.D.; MARKIZOVA, G.B.;
MESHKOV, V.V.; OSTROVSKIY, M.A.; RATNER, Ye.S.; SHEFTEL', Ye.B.;
YUROV, S.G.

Nikolai Nikolaevich Ermolinskii; obituary. Svetotekhnika 8
no.12:28 D '62. (MIRA 16:1)
(Ermolinskii, Nikolai Nikolaevich, 1894-1962)

OSTROVSKIY, M.A.; KAYUSHIN, L.P.

Study of electron paramagnetic resonance in the retina during the
action of light. Dokl. AN SSSR 151 no.4:986-988 Ag '63.
(MIRA 16:8)

1. Institut vysshoy nervnoy deyatel'nosti i neyrofiziologii AN SSSR
1 Institut biologicheskoy fiziki AN SSSR. Predstavлено академиком
N.N.Semenovym.
(ELECTRORETINOGRAPHY) (PARAMAGNETIC RESONANCE AND RELAXATION)

KROL', TS.I., kand. tekhn. nauk; OSTROVSKIY, M.A., kand. tekhn. nauk

Why should the illuminance norms not be decreased when the
installational height of the floodlights is increased?
Svetotekhnika 9 no.5:24-25 My '63. (MIRA 16:7)

1. Vsesoyuznyy svetotekhnicheskiy institut.
(Electric lighting--Standards)

L 17508-63

ACCESSION NR: AP3004437

S/0020/63/151/004/09B6/0988

45

AUTHORS: Ostrovskiy, M. A.; Kayushin, L. P.

TITLE: Study of electron paramagnetic resonance in the retina in the presence of light.

SOURCE: All SSSR. Doklady*, v. 151, no. 4, 1963, 986-988.

TOPIC TAGS: electron paramagnetic resonance, retina, Rana temporaria.

ABSTRACT: Isolated, dark-adapted retinas from the frog, Rana temporaria, which contained traces of the pigmented epithelium were examined in an electron paramagnetic resonance (EPR) spectrometer at temperatures below 0°C. The retinas gave a definite EPR signal at -20°C. An average increase in amplitude of 50% occurred when the retinas were exposed to a 750 watt incandescent lamp. The amplitude returned to its initial level a few minutes after the lamp was turned off. Both light and dark signals had a singlet form; the g-factor of the spectrum approximated the g-form of a free electron; and the width of the absorption lines between points of minimal slope was about 6 oersteds. A similar response was obtained at -196°C, but the decrease in amplitude after the lamp was switched off was very slow. These experiments indicate that there is a considerable increase in the number of unpaired electrons in the retina when it is exposed to visible light.

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light. "Pure" pigmented epithelium exposed to visible light gave signals which increased only 17-19% from the initial "dark" values. Increase in the amplitude of the signal in retinas with traces of pigmented epithelium may be due either to photochemical processes in the photoreceptors or to basic photochemical properties of the photoreceptor-pigmented epithelium system. The low temperatures employed in these experiments make it unlikely that enzymatic processes are involved. "Authors express deep gratitude to Prof. V. G. Samsonovaya for her constant interest in the work and valuable advice, and also to G. T. Rikherevaya and M. K. Pulatovaya for assistance in the work." Orig. art. has: 3 figures.

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